

DIRECT TESTIMONY AND EXHIBITS

OF

BRIAN HORII

ON BEHALF OF THE

SOUTH CAROLINA OFFICE OF REGULATORY STAFF

DOCKET NO. 2019-182-E

IN RE: SOUTH CAROLINA ENERGY FREEDOM ACT (H.3659) PROCEEDING

INITIATED PURSUANT TO S.C. CODE ANN. SECTION 58-40-20(C): GENERIC

DOCKET TO (1) INVESTIGATE AND DETERMINE THE COSTS AND

BENEFITS OF THE CURRENT NET ENERGY METERING PROGRAM AND

(2) ESTABLISH A METHODOLOGY FOR CALCULATING THE VALUE OF

THE ENERGY PRODUCED BY CUSTOMER-GENERATORS

Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS AND OCCUPATION.

My name is Brian Horii. My business address is 44 Montgomery Street, San Francisco, California 94104. I am a Senior Partner with Energy and Environmental Economics, Inc. ("E3"). Founded in 1989, E3 is an energy consulting firm with expertise in helping utilities, regulators, policy makers, developers, and investors make the best strategic decisions possible as they implement new public policies, respond to technological advances, and address customers' shifting expectations.

Q. PLEASE STATE YOUR EDUCATIONAL BACKGROUND AND EXPERIENCE.

A. I have over thirty (30) years of experience in the energy industry. My areas of expertise include avoided costs, utility ratemaking, cost-effectiveness evaluations,

1 CO₂ emissions, and the net benefits of the increase in South Carolina economic activity
2 due to DER.

3 (4) **Methodology from Commission Order No. 2015-194.** This Commission
4 Order established an NEM Methodology for determining the value of NEM DER. The
5 methodology presents eleven (11) categories of avoided costs. The avoided costs are all
6 “direct” economic impacts that the methodology describes as both “avoided” costs and
7 “marginal” costs in the descriptions. The terms “marginal cost” and “avoided cost” can be
8 considered synonymous. Marginal cost is the term generally used in economic theory and
9 in the discussion of the derivation of cost changes. It is more general in that it does not
10 imply the cost change is always an avoidance of costs. Avoided cost is the term generally
11 used in the valuation of resources because the context is a comparison of the cost of the
12 resource versus the costs that can be avoided by its acquisition. An avoided cost, however,
13 can be negative (an increase in cost) in some situations, so the Commission can use the
14 terms marginal cost and avoided cost interchangeably.

15 **Q. HOW COULD MARGINAL COSTS BE USED TO DETERMINE THE COST**
16 **SHIFT ASSOCIATED WITH NEM SOLAR?**

17 **A.** Solar systems or any demand side management (“DSM”) options reduce customer
18 bills through reductions in the amount of electricity the customer needs to purchase from a
19 utility. At the same time, this reduced usage results in lower costs for the utility to provide
20 service because of lower power procurement or production related costs as well as lower
21 generation plant and delivery equipment costs. These utility cost savings are the marginal